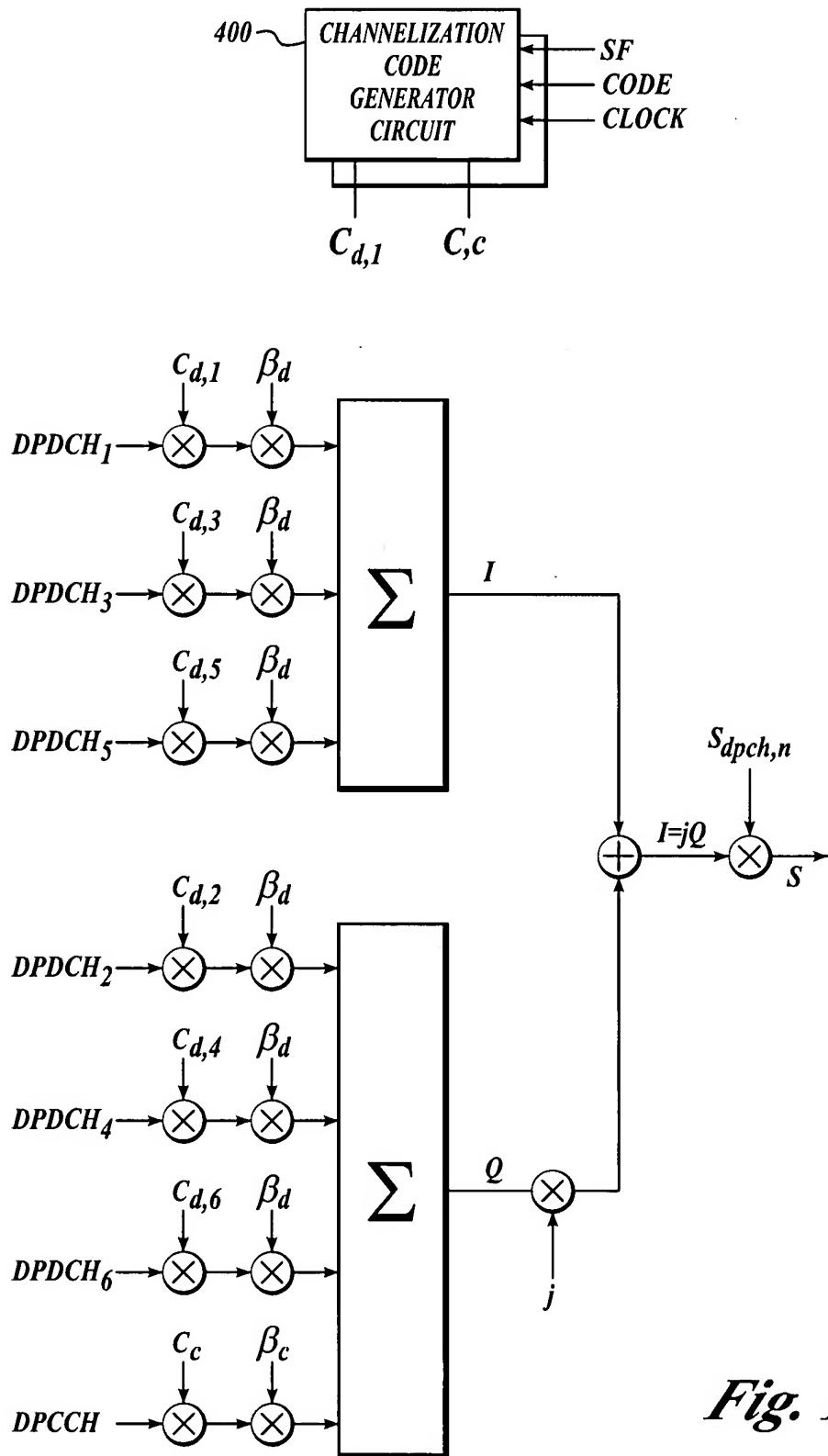




Title: LOW GATE COUNT 3GPP CHANNELIZATION CODE GENERATOR
 First named applicant: Rajaram Subramoniam
 Filing Date: 08/20/2003 Application No.: 10/644,125
 Attorney Docket No.: 08211/0200248-US0/P05666

1/4





Title: LOW GATE COUNT 3GPP CHANNELIZATION CODE GENERATOR
 First named applicant: Rajaram Subramoniam
 Filing Date: 08/20/2003 Application No.: 10/644,125
 Attorney Docket No.: 08211/0200248-US0/P05666

2/4

$$C_{ch,1,0} = 1,$$

$$\begin{bmatrix} C_{ch,2,0} \\ C_{ch,2,1} \end{bmatrix} = \begin{bmatrix} C_{ch,1,0} & C_{ch,1,0} \\ C_{ch,1,0} & -C_{ch,1,0} \end{bmatrix} = \begin{bmatrix} 1 & 1 \\ 1 & -1 \end{bmatrix}$$

$$\begin{bmatrix} C_{ch,2^{(n+1)},0} \\ C_{ch,2^{(n+1)},1} \\ C_{ch,2^{(n+1)},2} \\ C_{ch,2^{(n+1)},3} \\ \vdots \\ C_{ch,2^{(n+1)},2^{(n+1)-2}} \\ C_{ch,2^{(n+1)},2^{(n+1)-1}} \end{bmatrix} = \begin{bmatrix} C_{ch,2^n,0} & C_{ch,2^n,0} \\ C_{ch,2^n,0} & -C_{ch,2^n,0} \\ C_{ch,2^n,1} & C_{ch,2^n,1} \\ C_{ch,2^n,1} & -C_{ch,2^n,1} \\ \vdots & \vdots \\ C_{ch,2^n,2^n-1} & C_{ch,2^n,2^n-1} \\ C_{ch,2^n,2^n-1} & -C_{ch,2^n,2^n-1} \end{bmatrix}$$

Fig. 2 (PRIOR ART)



Title: LOW GATE COUNT 3GPP CHANNELIZATION CODE GENERATOR
 First named applicant: Rajaram Subramoniam
 Filing Date: 08/20/2003 Application No.: 10/644,125
 Attorney Docket No.: 08211/0200248-US0/P05666

3/4

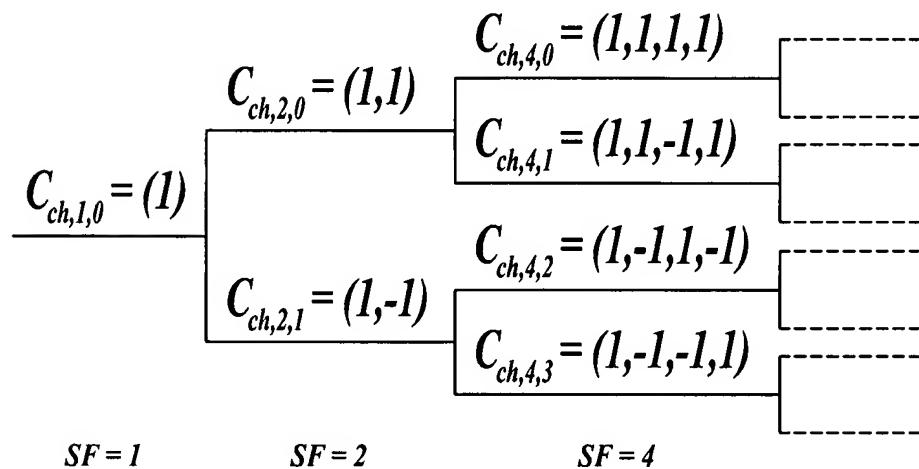


Fig. 3 (PRIOR ART)



4/4

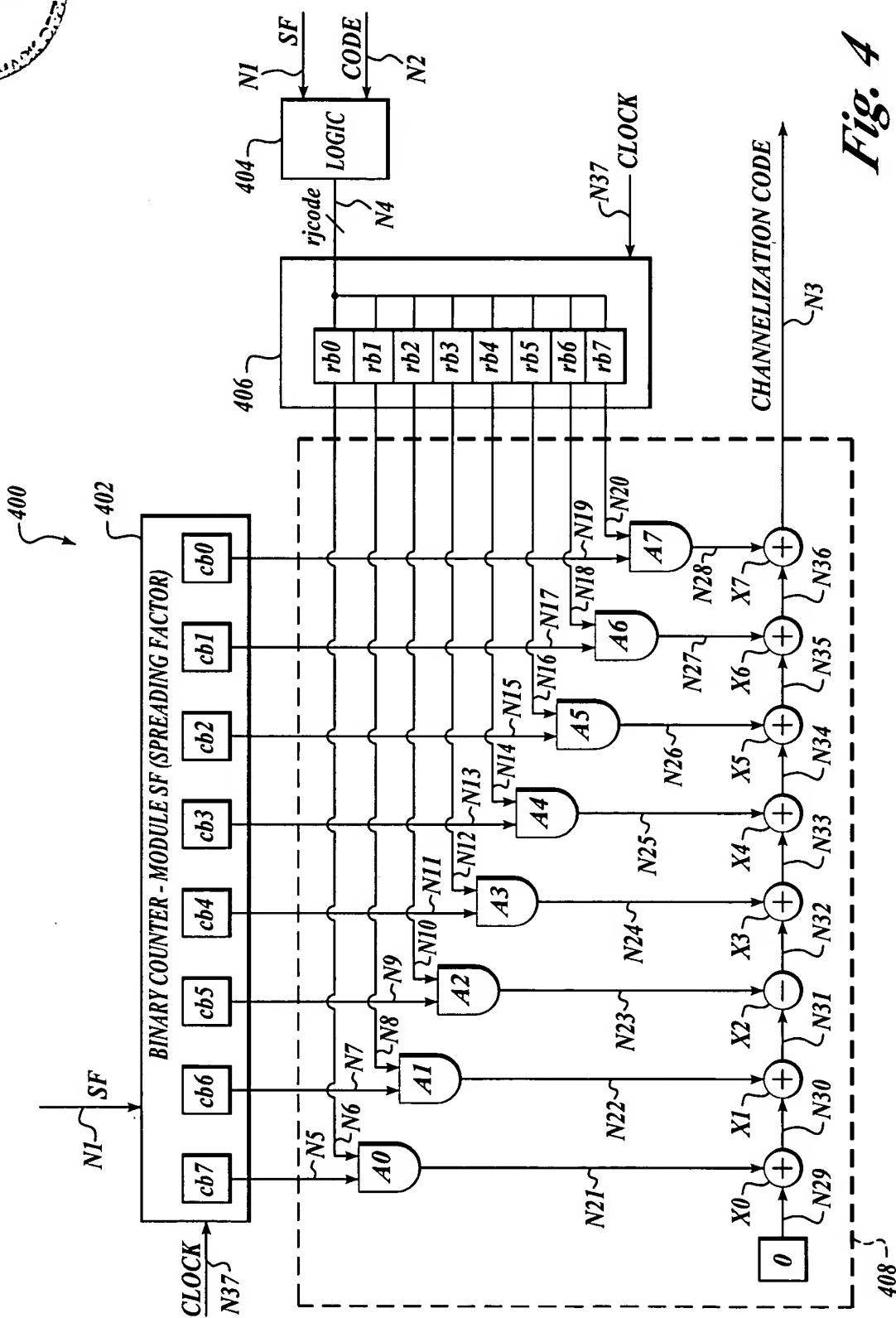


Fig. 4